

What is claimed is:

- 1 1. A method for processing a semiconductor substrate, comprising the steps of:
  - 2 (a) providing a substrate having at least one filter region with a plurality of bond pads
  - 3 therein;
  - 4 (b) depositing metal above the bond pads, to reduce a step height thereof;
  - 5 (c) forming a planarization layer, such that the deposited metal has a height near to a height
  - 6 of the planarization layer; and
  - 7 (d) forming the at least one color resist layer above the planarization layer.
- 1 2. The method of claim 1, wherein step (b) includes depositing the metal by sputtering.
- 1 3. The method of claim 1, wherein the deposited metal has a height slightly greater than the  
2 height of the planarization layer.
- 1 4. The method of claim 1, further comprising forming a spacer layer above the color resist  
2 layer, the spacer layer having a height slightly greater than a height of the deposited metal.
- 1 5. The method of claim 1, wherein the substrate has a plurality of scribe lines arranged  
2 around the at least one filter region, the method further comprising at least partially filling the  
3 scribe lines with a material used to form the planarization layer.
- 1 6. The method of claim 5, wherein the scribe lines are at least partially filled during step (c).
- 1 7. The method of claim 1, wherein the substrate has a plurality of scribe lines arranged  
2 around the at least one filter region, the method further comprising at least partially filling the  
3 scribe lines with a resist material.
- 1 8. The method of claim 7, further comprising keeping the resist material in the scribe lines  
2 after step (d) until the color filters are diced.
- 1 9. A color filter, comprising

2 a substrate having at least one filter region with a plurality of conductive bond pad  
3 structures therein;  
4 a planarization layer above the substrate, the bond pad structures having a height near a  
5 height of the planarization layer; and  
6 at least one color resist layer formed above the planarization layer within the at least one  
7 filter region.

1 10. The color filter of claim 9, wherein:

2 the substrate has a plurality of scribe lines arranged to form the at least one filter region,  
3 the scribe lines being at least partially filled with a resist material to reduce a step height of the  
4 scribe lines, and

5 at least one of the group consisting of the bond pad structures and the resist material has a  
6 height approximately equal to a height of the planarization layer.

1 11. The color filter of claim 10, wherein the planarization layer is made of the resist material.

1 12. The color filter of claim 10, wherein the bond pad structures has a height slightly greater  
2 than the height of the planarization layer.

1 13. The color filter of claim 9, further comprising a spacer layer above the color resist layer,  
2 the spacer layer having a height slightly greater than a height of the bond pad structures.